

WHAT IS CLAIMED IS:

1. A computer-implemented system for conducting an automatic negotiation, comprising:

5 a database operable to store profiles for parties to the negotiation, each profile specifying values for one or more parameters being negotiated, these values reflecting a desirable outcome of the negotiation for the associated party; and

a matching server operable to:

access an offer from a first party containing values for one or more of the parameters being negotiated;

10 compute a distance between the values in the offer and the values in the profile of a second party;

if the distance is acceptably small, cause the offer to be accepted by the second party to conclude the negotiation; and

15 if the distance is not acceptably small, automatically modify one or more values in the offer such that the distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, cause the modified offer to be accepted by both the first and second parties to conclude the automatic negotiation.

20 2. The system of Claim 1, wherein the values in the profile are selected from the group consisting of:

values reflecting true needs with respect to parameters being negotiated; and

values reflecting a desired outcome with respect to parameters being negotiated, the desired outcome being more favorable than the true needs.

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3. The system of Claim 1, wherein the matching server generates the offer for the first party automatically according to the profile of the first party.

4. The system of Claim 1, wherein the matching server automatically accepts
30 the offer on behalf of the second party if the distance is acceptably small.

5. The system of Claim 1, wherein the distance L_n is computed as:

$$L_n = \sqrt[n]{\frac{\sum_k^K |offer_k - profile_k|^n}{K}}$$

- 5 where K is number of parameters being negotiated, $offer_k$ is the offer value for the k th parameter, $profile_k$ is the profile value for the k th parameter, the summation is over all K parameters, and n is the order of the distance measure.

6. The system of Claim 5, wherein the value of n is specified as part of the
10 profile.

7. The system of Claim 6, wherein the matching server is further operable to determine the value of n based on one or more words, as opposed to numbers, within the
15 profile.

8. The system of Claim 1, wherein:
the parameters are organized into one or more subsets;
the distance between the offer values and the profile values is computed for each
parameter subset; and

- 20 the matching server is further operable to:
for each parameter subset, apply a weight to the distance to compute a weighted distance for the subset;

- compute an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

- 25 if the overall distance is acceptably small, cause the offer to be accepted by the second party to conclude the negotiation; and

- if the overall distance is not acceptably small, automatically modify one or more values in the offer such that the overall distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in
30 response, cause the modified offer to be accepted by the first and second parties to conclude the automatic negotiation.

9. The system of Claim 8, wherein the weighted distances are summed over all the parameter subsets to compute the overall distance.

5 10. The system of Claim 8, wherein the weight for each parameter subset is specified as part of the profile.

11. The system of Claim 10, wherein the matching server is further operable to determine the weights for one or more parameter subsets based on one or more words,
10 as opposed to numbers, within the profile.

12. The system of Claim 8, wherein:
the distance for a first parameter subset is computed as an absolute error between the associated parameter values for the offer and profile;
15 the distance for a second parameter subset is computed as a mean-square error between the associated parameter values for the offer and profile; and
the weighted distances for the first and second parameter subsets are summed to compute the overall distance for the offer.

20 13. The system of Claim 8, wherein the distance for a parameter subset is computed to reflect a preference selected from the group consisting of:
exact matches between the parameter values for the offer and profile and, where no exact match is possible for a parameter, a minimum difference between the values for the offer and profile for that parameter;
25 close matches between the parameter values for the offer and profile for all of the parameters simultaneously, an exact match not being required for any of the parameters; and
an exception prohibiting exact matches between the parameter values for the offer and profile.

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14. The system of Claim 1, wherein the negotiation is over parameters of one or more items selected from the group consisting of:

parts, components, products, or other tangible items;

services;

5 real property; and

contracts or other legal instruments.

15. The system of Claim 1, further comprising a marketplace associated with the matching server.

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means for storing profiles for parties to the negotiation, each profile specifying values for one or more parameters being negotiated, these values reflecting a desirable outcome of the negotiation for the associated party;

means for computing a distance between the values in the offer and the values in the profile of a second party;

means for, if the distance is not acceptably small, automatically modifying one or more values in the offer such that the distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, causing the modified offer to be accepted by the first and second parties to conclude the automatic negotiation.

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17. Software for conducting an automatic negotiation, the software embodied in a computer-readable medium and operable to:

access profiles of parties to the negotiation, each profile specifying values for one or more parameters being negotiated, these values reflecting a desirable outcome of the negotiation for the associated party;

access an offer from a first party that contains values for the parameters being negotiated;

compute a distance between the values in the offer and the values in the profile of a second party;

if the distance is acceptably small, cause the offer to be accepted by the second party to conclude the negotiation; and

if the distance is not acceptably small, automatically modify one or more values in the offer such that the distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, cause the modified offer to be accepted by the first and second parties to conclude the automatic negotiation.

18. A method for conducting an automatic negotiation, comprising:
- accessing profiles of parties to the negotiation, each profile specifying values for one or more parameters being negotiated, these values reflecting a desirable outcome of the negotiation for the associated party;
- 5 accessing an offer from a first party that contains values for the parameters being negotiated;
- computing a distance between the values in the offer and the values in the profile of a second party;
- if the distance is acceptably small, causing the offer to be accepted by the second
- 10 party to conclude the negotiation; and
- if the distance is not acceptably small, then automatically modifying one or more values in the offer such that the distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, causing the modified offer to be accepted by both the first and second parties to conclude the
- 15 automatic negotiation.
19. The method of Claim 18, wherein the values in the profile are selected from the group consisting of:
- values reflecting true needs with respect to parameters being negotiated; and
- 20 values reflecting a desired outcome with respect to parameters being negotiated, the desired outcome being more favorable than the true needs.
20. The method of Claim 18, further comprising generating the offer for the first party automatically according to the profile of the first party.
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21. The method of Claim 18, further comprising automatically accepting the offer on behalf of the second party if the distance is acceptably small.

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22. The method of Claim 18, wherein the distance L_n is computed as:

$$L_n = \sqrt[n]{\frac{\sum_k^K |offer_k - profile_k|^n}{K}}$$

5 where K is number of parameters being negotiated, $offer_k$ is the offer value for the k th parameter, $profile_k$ is the profile value for the k th parameter, the summation is over all K parameters, and n is the order of the distance measure.

10 23. The method of Claim 22, wherein the value of n is specified as part of the profile.

24. The method of Claim 23, further comprising determining the value of n based on one or more words, as opposed to numbers, within the profile.

15 25. The method of Claim 18, wherein:
the parameters are organized into one or more subsets;
the distance between the offer values and the profile values is computed for each parameter subset; and

20 the method further comprises:
for each parameter subset, applying a weight to the distance to compute a weighted distance for the subset;

computing an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

25 if the overall distance is acceptably small, causing the offer to be accepted by the second party to conclude the negotiation; and

30 if the overall distance is not acceptably small, automatically modifying one or more values in the offer such that the overall distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, causing the modified offer to be accepted by the first and second parties to conclude the automatic negotiation.

28. The method of Claim 27, further comprising determining the weights for one or more parameter subsets based on one or more words, as opposed to numbers, within the profile.

29. The method of Claim 25, wherein:

the distance for a second parameter subset is computed as a mean-square error
15 between the associated parameter values for the offer and profile; and

30. The method of Claim 25, wherein the distance for a parameter subset is
20 computed to reflect a preference selected from the group consisting of:

close matches between the parameter values for the offer and profile for all of the
25 parameters simultaneously, an exact match not being required for any of the parameters;
and

an exception prohibiting exact matches between the parameter values for the offer and profile.

31. The method of Claim 18, wherein the negotiation is over parameters of one or more items selected from the group consisting of:

parts, components, products, or other tangible items;

services;

5 real property; and

contracts or other legal instruments.

32. The method of Claim 18, wherein the negotiation is conducted within an electronic marketplace.

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33. Software for conducting a negotiation, the software being embodied in a computer-readable medium and operable to:

at a first party, receive an offer generated at a second party containing values for one or more parameters being negotiated;

5 compute a distance between the values in the offer and the values in a profile of the first party, the profile specifying values for the parameters being negotiated to reflect a desirable outcome of the negotiation for the first party;

if the distance is acceptably small, accept the offer to conclude the negotiation; and

10 if the distance is not acceptably small, modify one or more values in the offer such that the distance is decreased and communicate the modified offer to the second party to continue the negotiation.

34. The software of Claim 33, further operable to modify the values in the
15 offer in part according to an estimated profile of the second party.

35. The software of Claim 33, wherein the offer received at the first party is a counter-offer to an initial offer previously generated at the first party and communicated
20 to the second party.

36. The software of Claim 35, further operable to generate the initial offer in part according to an estimated profile of the second party.

37. The software of Claim 33, wherein the values in the profile are selected
25 from the group consisting of:

values reflecting true needs with respect to parameters being negotiated; and

values reflecting a desired outcome with respect to parameters being negotiated, the desired outcome being more favorable than the true needs.

38. The software of Claim 33, wherein the distance L_n is computed as:

$$L_n = \sqrt[n]{\frac{\sum_k^K |offer_k - profile_k|^n}{K}}$$

5 where K is number of parameters being negotiated, $offer_k$ is the offer value for the k th parameter, $profile_k$ is the profile value for the k th parameter, the summation is over all K parameters, and n is the order of the distance measure.

10 39. The software of Claim 38, wherein the value of n is specified as part of the profile.

40. The software of Claim 39, further operable to determine the value of n based on one or more words, as opposed to numbers, within the profile.

15 41. The software of Claim 33, wherein:
the parameters are organized into one or more subsets;
the distance between the offer values and the profile values is computed for each parameter subset; and

20 the software is further operable to:
for each parameter subset, apply a weight to the distance to compute a weighted distance for the subset;

compute an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

25 if the overall distance is acceptably small, accept the offer to conclude the negotiation; and

if the overall distance is not acceptably small, modify one or more values in the offer such that the overall distance is decreased and communicate the modified offer to the second party to continue the negotiation.

30 42. The software of Claim 41, wherein the weighted distances are summed over all the parameter subsets to compute the overall distance.

43. The software of Claim 41, wherein the weight for each parameter subset is specified as part of the profile.

5 44. The software of Claim 43, further operable to determine the weights for one or more parameter subsets based on one or more words, as opposed to numbers, within the profile.

 45. The software of Claim 41, wherein:
10 the distance for a first parameter subset is computed as an absolute error between the associated parameter values for the offer and profile;
 the distance for a second parameter subset is computed as a mean-square error between the associated parameter values for the offer and profile; and
 the weighted distances for the first and second parameter subsets are summed to
15 compute the overall distance for the offer.

 46. The software of Claim 41, wherein the distance for a parameter subset is computed to reflect a preference selected from the group consisting of:
 exact matches between the parameter values for the offer and profile and, where
20 no exact match is possible for a parameter, a minimum difference between the values for the offer and profile for that parameter;
 close matches between the parameter values for the offer and profile for all of the parameters simultaneously, an exact match not being required for any of the parameters;
 and
25 an exception prohibiting exact matches between the parameter values for the offer and profile.

 47. The software of Claim 33, wherein the negotiation is over parameters of one or more items selected from the group consisting of:
30 parts, components, products, or other tangible items;
 services;
 real property; and
 contracts or other legal instruments.

Variable	Mean	SD	Min	Max	Median	Mode	Skewness	Kurtosis	Normality
Age	35.2	12.5	20	65	30	30	0.15	3.2	0.95
Gender	0.5	0.5	0	1	0	0	0.0	1.0	0.99
Marital Status	0.7	0.5	0	1	0	0	0.0	1.0	0.99
Education	12.5	2.0	9	16	12	12	0.10	3.0	0.96
Income	1500	500	500	3000	1000	1000	0.20	3.5	0.94
Occupation	1.5	1.0	1	3	1	1	0.0	1.0	0.99
Health Status	0.8	0.4	0	1	0	0	0.0	1.0	0.99
Stress Level	4.5	1.5	1	7	4	4	0.10	3.0	0.96
Life Satisfaction	5.5	1.0	1	7	5	5	0.10	3.0	0.96
Resilience	6.0	1.0	1	7	6	6	0.10	3.0	0.96
Optimism	6.5	1.0	1	7	6	6	0.10	3.0	0.96
Emotional Stability	6.0	1.0	1	7	6	6	0.10	3.0	0.96
Self-Esteem	6.0	1.0	1	7	6	6	0.10	3.0	0.96
Life Purpose	6.0	1.0	1	7	6	6	0.10	3.0	0.96
Meaning in Life	6.0	1.0	1	7	6	6	0.10	3.0	0.96
Existential Well-being	6.0	1.0	1	7	6	6	0.10	3.0	0.96
Overall Well-being	6.0	1.0	1	7	6	6	0.10	3.0	0.96

49. A system for conducting a negotiation, comprising:

means for receiving at a first party an offer generated at a second party, the offer containing values for one or more parameters being negotiated;

5 means for computing a distance between the values in the offer and the values in a profile of the first party, the profile specifying values for the parameters being negotiated to reflect a desirable outcome of the negotiation for the first party;

means for, if the distance is acceptably small, accepting the offer conclude the negotiation; and

10 means for, if the distance is not acceptably small, modifying one or more values in the offer such that the distance is decreased and communicating the modified offer to the second party to continue the negotiation.

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50. A method of conducting a negotiation, comprising:
at a first party, receiving an offer generated at a second party containing values
for one or more parameters being negotiated;
computing a distance between the values in the offer and the values in a profile of
5 the first party, the profile specifying values for the parameters being negotiated to reflect
a desirable outcome of the negotiation for the first party;
if the distance is acceptably small, accepting the offer conclude the negotiation;
and
if the distance is not acceptably small, modifying one or more values in the offer
10 such that the distance is decreased and communicating the modified offer to the second
party to continue the negotiation.

51. The method of Claim 50, further comprising modifying the values in the
offer in part according to an estimated profile of the second party.

52. The method of Claim 50, wherein the offer received at the first party is a
counter-offer to an initial offer previously generated at the first party and communicated
to the second party.

53. The method of Claim 52, further comprising generating the initial offer in
part according to an estimated profile of the second party.

54. The method of Claim 50, wherein the values in the profile are selected
from the group consisting of:
25 values reflecting true needs with respect to parameters being negotiated; and
values reflecting a desired outcome with respect to parameters being negotiated,
the desired outcome being more favorable than the true needs.

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55. The method of Claim 50, wherein the distance L_n is computed as:

5 where K is number of parameters being negotiated, $offer_k$ is the offer value for the k th parameter, $profile_k$ is the profile value for the k th parameter, the summation is over all K parameters, and n is the order of the distance measure.

56. The method of Claim 55, wherein the value of n is specified as part of the
10 profile.

57. The method of Claim 56, further comprising determining the value of n based on one or more words, as opposed to numbers, within the profile.

15 58. The method of Claim 50, wherein:
 the parameters are organized into one or more subsets;
 the distance between the offer values and the profile values is computed for each
 parameter subset; and

the method further comprises:

20 for each parameter subset, applying a weight to the distance to compute a weighted distance for the subset;

computing an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

if the overall distance is acceptably small, accepting the offer to conclude
25 the negotiation; and

if the overall distance is not acceptably small, modifying one or more values in the offer such that the overall distance is decreased and communicating the modified offer to the second party to continue the negotiation.

59. The method of Claim 58, wherein the weighted distances are summed over all the parameter subsets to compute the overall distance.

60. The method of Claim 58, wherein the weight for each parameter subset is specified as part of the profile.

5 61. The method of Claim 60, further comprising determining the weights for
one or more parameter subsets based on one or more words, as opposed to numbers,
within the profile.

62. The method of Claim 58, wherein:

10 the distance for a first parameter subset is computed as an absolute error between the associated parameter values for the offer and profile;

the distance for a second parameter subset is computed as a mean-square error between the associated parameter values for the offer and profile; and

the weighted distances for the first and second parameter subsets are summed to

15 compute the overall distance for the offer.

63. The method of Claim 58, wherein the distance for a parameter subset is computed to reflect a preference selected from the group consisting of:

- exact matches between the parameter values for the offer and profile and, where
- no exact match is possible for a parameter, a minimum difference between the values for the offer and profile for that parameter;
- close matches between the parameter values for the offer and profile for all of the parameters simultaneously, an exact match not being required for any of the parameters;
- and
- an exception prohibiting exact matches between the parameter values for the offer and profile.

64. The method of Claim 50, wherein the negotiation is over parameters of one or more items selected from the group consisting of:

30 parts, components, products, or other tangible items;
services;
real property; and
contracts or other legal instruments.

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66. A computer-implemented system for conducting an automatic negotiation, comprising:

a database operable to store profiles for parties to the negotiation, each profile specifying values for one or more parameters being negotiated, the parameters being
5 organized into one or more subsets, the parameter values reflecting a desirable outcome of the negotiation for the associated party; and

a matching server operable to:

access an offer from a first party containing values for one or more of the parameters being negotiated;

10 for each parameter subset, compute a distance between the values in the offer and the values in the profile of a second party;

for each parameter subset, apply a weight to the distance to compute a weighted distance for the subset;

15 compute an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

if the overall distance is acceptably small, cause the offer to be accepted by the second party to conclude the negotiation; and

20 if the overall distance is not acceptably small, automatically modify one or more values in the offer such that the overall distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, cause the modified offer to be accepted by both the first and second parties to conclude the automatic negotiation.

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access profiles for parties to the negotiation, each profile specifying values for one or more parameters being negotiated, the parameters being organized into one or more subsets, the parameter values reflecting a desirable outcome of the negotiation for the associated party; and

for each parameter subset, compute a distance between the values in the offer and
10 the values in the profile of a second party;

compute an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

if the overall distance is not acceptably small, automatically modify one or more values in the offer such that the overall distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, cause the modified offer to be accepted by both the first and second parties to conclude the automatic negotiation.

68. A method for conducting an automatic negotiation, comprising:

accessing profiles for parties to the negotiation, each profile specifying values for one or more parameters being negotiated, the parameters being organized into one or more subsets, the parameter values reflecting a desirable outcome of the negotiation for the associated party; and

accessing an offer from a first party containing values for one or more of the parameters being negotiated;

for each parameter subset, computing a distance between the values in the offer and the values in the profile of a second party;

for each parameter subset, applying a weight to the distance to compute a weighted distance for the subset;

computing an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

if the overall distance is acceptably small, causing the offer to be accepted by the second party to conclude the negotiation; and

if the overall distance is not acceptably small, automatically modifying one or more values in the offer such that the overall distances between the modified offer and the profiles of the first and second parties are acceptably small simultaneously and, in response, causing the modified offer to be accepted by both the first and second parties to conclude the automatic negotiation.

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for each parameter subset, compute a distance between the values in the offer and the values in a profile of the first party, the profile specifying values for the parameters being negotiated to reflect a desirable outcome of the negotiation for the first party;

compute an overall distance between the offer and the profile according to the weighted distances of the parameter subsets;

if the overall distance is not acceptably small, modify one or more values in the offer such that the overall distance is decreased and communicate the modified offer to the second party to continue the negotiation.

if the overall distance is not acceptably small, modify one or more values in the offer such that the overall distance is decreased and communicate the modified offer to the second party to continue the negotiation.

at a first party, receiving an offer generated at a second party containing values for one or more parameters being negotiated, the parameters being organized into one or more subsets;

for each parameter subset, applying a weight to the distance to compute a weighted distance for the subset;

if the overall distance is acceptably small, accepting the offer to conclude the negotiation; and

15 if the overall distance is not acceptably small, modifying one or more values in the offer such that the overall distance is decreased and communicating the modified offer to the second party to continue the negotiation.